

From: Will Wang Graylin <wgraylin@roamdata.com>
To: 'John Rodley'
CC: 'John Frontz'; 'Michael Arner'
Sent: 3/1/2010 1:12:57 PM
Subject: RE: FW: Hi

JR,

Good feedback. For accessory product roadmap, the 3 types we may support for different markets are: low cost swiper; Swiper Printer combo; and Debit EMV POS. For the US market, Low Cost Swiper is most applicable and what we need to figure out for ETA and subsequent launch. I would like ROAM to control the distribution as accessories only sold via our storefront and myROAM to end users. Otherwise we would have to deal with each ISO and varying pricing in the market we can't control.

Low Cost Swiper: There three potential versions we can choose from (hopefully we end up with only one SKU we support) - target price to end users \$29 to \$49/unit.

- 1) Without encryption, 3.5mm audio jack, can take delivery quickly without modification for ETA, samples are coming, need to pay for tooling of \$10K, \$3 to \$4/unit - (security similar to woosim where we encrypt after getting the track data, vulnerable to people using units as skimmer, but cheap).
- 2) With encryption, requires battery and charging with USB, 3.5mm output and USB output (delivery time as stated, \$7/unit)
- 3) With encryption, same as above, adding speaker output (not much more work but different hardware, delivery time as stated, \$8.5/unit) – if this unit works well, we can standardize on one low cost unit. I did speak to Wallner this weekend, he has a design done, and was waiting for us. He is ready to hand the design to BBPOS and let them run with it, so I don't see Wallner as a bottleneck here. We can get on the phone with Ben Lo this morning about encryption keys to integrate to the player.

Printer Swiper: Target price to end users: \$199/unit

- 1) we can use the Woosim Bluetooth, no encryption, \$129/unit. (targeted for higher end users) – there are other vendors but we'll stick with one SKU right now.

Later we can look at Debit, EMV POS for International and Debit Market:

- 1) BBPOS has an EMV POS we can modify with physical connector, Bluetooth, WiFi, PCI Certification required (separate initiative \$55 range/unit)
- 2) Extension of previous version possible to include barcode reader for line busting, or include printer (added cost of \$50 to \$80/unit)
- 3) The Low cost debit only version, not EMV, which may or may not get PCI certified (\$18/unit)

The questions now is how do we get the Bluetooth and BBPOS units ready in terms of player, the applications we support, and storefront /logistics support for delivery. We may want to launch Woosim as an early start before ETA, we can stock 50 to 100 units and be ready for sales ASAP to test the system, unless you feel that Player and app upgrades should be done together. Not sure if we want magtek as a backup, I want to minimize SKUs we support? Need to discuss.

Will

From: John Rodley [mailto:jrodley@roamdata.com]
Sent: Sunday, February 28, 2010 1:30 PM
To: Will Wang Graylin
Cc: John Frontz; Michael Arner
Subject: Re: FW: Hi

Engineering has 2 concrete interests in this discussion.

First is what accessories will be for-sale when accessory sales are added to the system for delivery to production by ETA. Clearly, the BBPOS will not be one of those accessories.

Second, how do we work with the BBPOS? We need a "final" version of the product, including encryption keys, in order to integrate with the various players and get those players QA'd and into the app stores. This requires several weeks lead time. Production players at ETA will likely not include BBPOS support.

As far as the future goes, this is a good thing for us even if it only plugs directly into the iPhone. I would rather not tangle any of the scheduling of work here with a reliance on Wallner. I don't know the guy, but our interaction with him so far has made him look dramatically less motivated to "get things done" than we are.

This is a good initiative for us. I have no interest in the contracts beyond the what and the when. I trust you guys to deal with that, and even if I didn't there's nothing I could do about it. You can cut me out of that discussion.

John Rodley
VP Engineering
ROAM Data
857-254-2405

On Sun, Feb 28, 2010 at 4:47 AM, Will Wang Graylin <wgraylin@roamdata.com> wrote:

John and John,

Here is the card reader proposal from Ben Lo at BBPOS.

I think this is the lowest cost development of this kind of reader we can find. Without encryption we can get in 6 weeks production units. The unit that includes encryption and the speaker design from Wallner would be at 14 weeks out for production. This design allows us to have encryption, and deliver with or without speaker transmission. We can demo current non encrypted units at ETA, actual delivery and launch will be June.

I think we would need to get started right away and show people at ETA what we can do, and launch in June the real product.

Your thoughts?

Will

From: Ben Lo [<mailto:benlo@systems-art.com.hk>]

Sent: Friday, February 26, 2010 5:30 AM

To: 'Will Wang Graylin'

Subject: RE: Hi

Hi Will,

Enclosed please find the proposal for your perusal. If that's ok, we can start the project next week.

Ben

From: Will Wang Graylin [<mailto:wgraylin@roamdata.com>]

Sent: Friday, February 26, 2010 11:59 AM

To: 'Ben Lo'

Subject: RE: Hi

Ben,

That is correct. The one with the speaker requires a power button, and it needs a manual way to broadcast the sound multiple times. If there is another swipe, the initial swiped data is erased, if power is turned off or times out, the card data

can be erased.

Best,
Will

From: Ben Lo [mailto:benlo@systems-art.com.hk]
Sent: Thursday, February 25, 2010 8:43 AM
To: 'Will Wang Graylin'
Subject: RE: Hi

I am putting proposal together now. Few questions:

For the one with speaker, it should be turned on by a power button as there is no connection between the device and the phone. Correct?

Maybe a different form factor for this model is better.

You told me that there is time constraint. I am not sure how strict is that. It takes few more weeks to design one with speaker. You also told me that you have developed a program to decode the acoustic sound wave from the speaker. You will share this with me?

Ben

From: Will Wang Graylin [mailto:wgraylin@roamdata.com]
Sent: Wednesday, February 24, 2010 10:41 PM
To: 'Ben Lo'
Subject: RE: Hi

Ben,
I understand. Please put the proposal together for me. Let me know if it will be any less if 1 and 2 are combined into one step?
Best regards,
Will

From: Ben Lo [mailto:benlo@systems-art.com.hk]
Sent: Wednesday, February 24, 2010 8:23 AM
To: 'Will Wang Graylin'
Subject: RE: Hi

Hi Will,

I propose that we can start to work on two projects – one is CircleSwipe with earpiece/USB and one is CircleSwipe with earpiece/USB/speaker.

For the first project, the NRE is \$35K. (The additional NRE is for development of PC API). Tooling fee is \$10K.

For the second project, the NRE of \$15K. If space for speaker has to be taken into consideration, the size of the product will be bigger. If that's fine, tooling cost can be saved. Otherwise, another tooling of about US\$10K is required. I will send you drawing for your decision before design.

When I quote \$4.5, I forget to add rechargeable battery and charging circuit. My mistake, I am very sorry that. Taking rechargeable battery and charging circuit into consideration, the cost of the device is about US\$7.

Adding speaker will add cost of around US\$1.5

If the proposal is ok, I can draft an agreement to start the projects asap.

BTW, I am going to send you three CircleSwipe without encryption.

Best regards,
Ben

From: Ben Lo [mailto:benlo@systems-art.com.hk]
Sent: Monday, February 22, 2010 1:47 PM
To: 'Will Wang Graylin'
Subject: RE: Hi

Hi Will

Exclusivity means the design (outlook and protocol) is dedicated for your company OR you want us to sell this type of product only to your company?

If you are talking about the previous scenario, it is possible. It is probably the best for us to start business and build relationship. If the product is custom-made for you, you can own the product and even find other manufacturers to produce the device, if our price is not competitive or quality is not good enough.

I propose \$25K NRE, \$10K tooling fee and the unit price of the device is US\$4.5 for quantity of 2K. I will provide you with BOM, CAD drawing, Circuit diagram, PCB Gerber file, API for the device.

If you are talking about the later scenario, it is possible only if you are one of the investors in our company.

Best regards,
Ben

From: Will Wang Graylin [mailto:wgraylin@roamdata.com]
Sent: Monday, February 22, 2010 11:59 AM
To: 'Ben Lo'
Subject: RE: Hi

Hi Ben,
Thank you very much. This is very helpful. I am traveling again this week to LA and Salt Lake City, and have a strategic planning meeting this Sat with my team. I am still trying to see when is a good time to come to HK. Things are hectic. I am interested in some level of exclusivity for our units if that is possible. I may have some development projects for you as well we will discuss.

Talk to you soon,
Will

From: Ben Lo [mailto:benlo@systems-art.com.hk]
Sent: Sunday, February 21, 2010 10:35 PM
To: 'Will Wang Graylin'
Subject: RE: Hi

Hi Will,

I can make CircleSwipe according to John Rodley requirement. It takes us few weeks to finish a prototype. We can deliver 2,000 units in 6 – 8 weeks. We need to pay around \$10K as the tooling fee. The BOM cost of the

device is about \$3. If I amortize the tooling fee into 2,000 devices, the BOM cost of a device is \$8. If I need to make some profit, I have to charge you \$10 per device. I think it is probably too high.

Will you consider to invest in our company or give us some projects in near future so that I can keep my team to continue development and service you? Either way, we have some cash for tooling. As our strategic partner, I can offer you the best price.

BTW, will you come to HK to visit us?

Best regards,
Ben

From: Will Wang Graylin [mailto:wgraylin@roamdata.com]
Sent: Friday, February 19, 2010 10:22 PM
To: 'Ben Lo'
Subject: RE: Hi

Thank you Ben. I am now back in Boston.

For Circle Swipe what will it take to get encryption in place. Is it similar to what John Rodley requested? And What do you need from me to place an order for 2,000 units of Circle Swipe? Talk to you again soon.

Best regards,
Will

From: Ben Lo [mailto:benlo@systems-art.com.hk]
Sent: Thursday, February 18, 2010 12:13 PM
To: 'Will Wang Graylin'
Subject: RE: Hi

Hi Will,

Please see my answer below.

Ben

From: Will Wang Graylin [mailto:wgraylin@roamdata.com]
Sent: Thursday, February 18, 2010 5:04 PM
To: 'Ben Lo'
Subject: RE: Hi

Hi Ben,
I am heading back to Boston today and will be on my way to the airport. I will call you again when I'm back home.

Based on our conversation you guys can provide the Circle Swipe with about 6 weeks notice. If I order the first couple of thousand you should be able to deliver by end of March?

Here are my assumptions and questions for your three products, can you answer or confirm:

1) On BBPOS device:

- a. it is designed to be PCI certified, but have not yet taken to labs for cert?

Ans: Correct

b. It can be modified for other purposes, and has Bluetooth built in already?

Ans: Correct

c. The BOM is around \$30 without Bluetooth?

Ans: Correct. We have to mark up some profit.

d. It can have WiFi or GSM but not yet designed in?

Ans: Correct

e. It can have serial interface to some printer but not yet tested?

Ans: Correct

f. Can this be DTMF also to communicate?

Ans: Yes

g. Is DTMF bidirectional or just one direction to the mobile phone? i.e. can you send information to the PIN Pad device from the phone side?

Ans: bi-directional

2) On Slim device:

a. It still needs modification for PCI PED certification. It would add cost to the device and require a couple of months of NRE and 3 months to certify PCI perhaps.

Ans: Correct

b. How much NRE and BOM cost would it add to be PCI certified?

Ans: BOM Cost – around US\$18.

NRE

1. Certification fee – around US\$30K

2. Engineering fee – estimate to be US\$60K

3. Tooling fee – around US\$10K

3) On Circle Swipe:

a. who owns this design, is it BBPOS or HATM?

Ans: BBPOS

b. Sounds like HATM filed patent on DTMF?

Ans: Correct but BBPOS is going to sign licensing agreement with HATM for use of the technology

c. It add cost and complexity to use DTMF? But that is the only way to get encryption correct?

Ans: Not necessary to be DTMF. DTMF is one of the coding methods.

d. The other way to communicate with Circle

Ans: I believe it is better to have encryption.

f. Who owns the design for Circle Swipe?

Ans: BBPOS

g. Can we white label the Circle Swipe to ROAM product?

Ans: Yes

Thank you very much Ben. Talk to you soon.
Will

From: Ben Lo [mailto:benlo@systems-art.com.hk]
Sent: Wednesday, February 17, 2010 3:43 AM
To: 'Will Wang Graylin'
Subject: Hi

Hi Will,

Got your message. Let me know what time you are convenient to talk. Maybe tonight your time?
I can call your mobile or any number you can access.

Ben